

Figure 1A

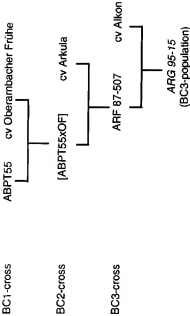


Figure 1B

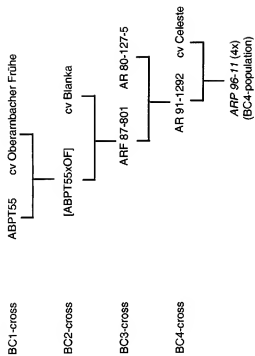


Figure 1C

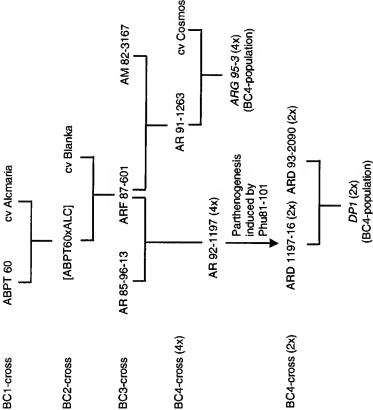
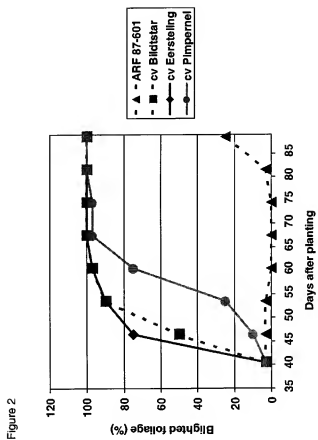


Figure 1D

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Figure 3

* ARF 87-507 and ARF 87-601 had identical disease progress curves

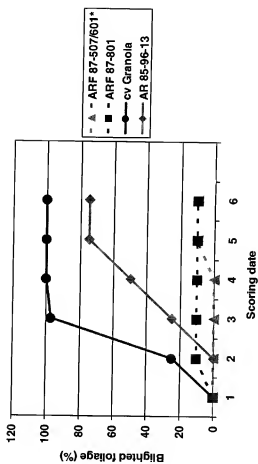




Figure 4



Figure 4 dia 3

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Figure 4 dia 4

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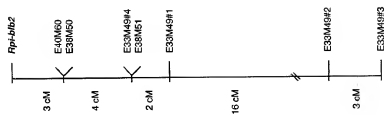


Figure 4 dia 5

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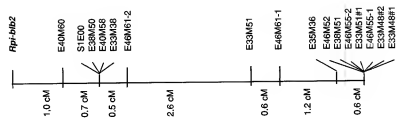


Figure 4 dia 6



ARG 95-15

Figure 5



ARG 95-3

Figure 6

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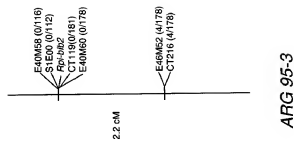


Figure 7

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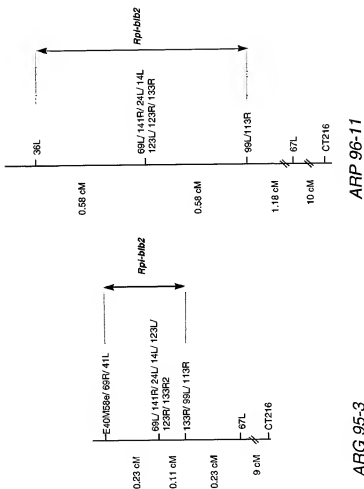


Figure 8

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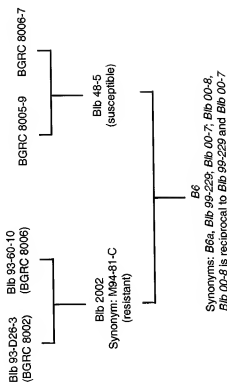
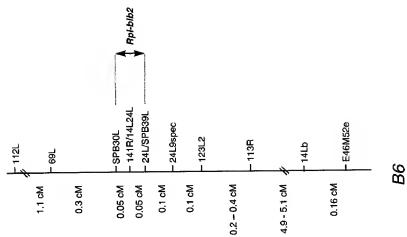


Figure 10



B6

Figure 11

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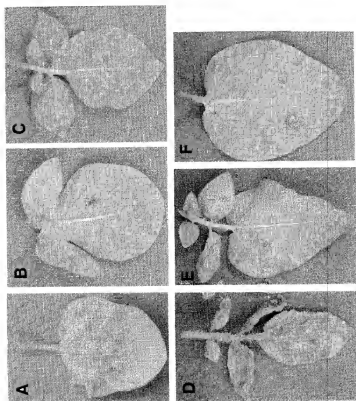


Figure 12

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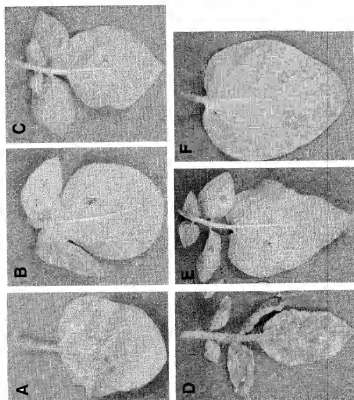


Figure 12 dia2

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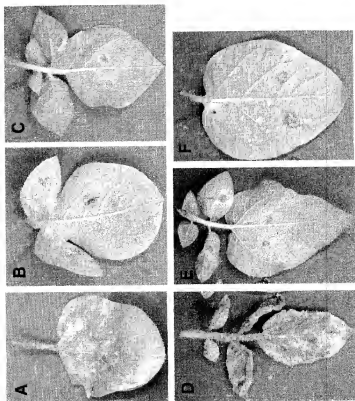


Figure 12 dia 3

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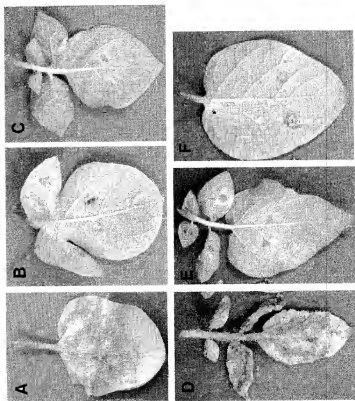


Figure 12 dia 4

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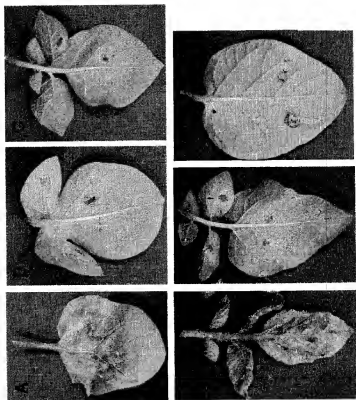


Figure 12 dia 5

Figure 13A

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CTGAAATTGAAGCTGACATTTATTGTACATATGTCCAGCTTTCCTATTTC 200
CGATTTGGAGAAGTTTGAAGATATAATGACTAGAAAAAGACAAGAGGTTG 250
AGAATCTGCTTCAACCAATTTTGGATGATGATGGCAAGACGTCGGGTGT 300
AAATATGTCCTTACTAGCTCGCCGGTAATATGGATGACTGTATAAGCTT 350
GTATCATCGTTCTAAATCAGATGCCACCATGATGGATGAGCAATGGGGCT 400
TCCTCCTCTTGAATCTCTCTCATCTATCCAAGCATCGTGCTGAAAGATG 450
TTTCCTGGAGTACTCAATATGAGGTTCTTCAGATGTATGTGGCAACAT 500
AAGGATTTCATGGATTGATAGTGAATTGTTGCATTAAAGCATGAGATGG 550
TTGAGAATGTCCTTATCTCTGTTTCAACTGATGGCTGAGAGAGTAGGACGC 600
TTCCTTTGGGAGGATCAGGCTGATGAAGACTCTCAACTCTCCGAGCTAGA 650
TGAGGATGATCAGAATGATAAAGACCTCAACTCTTCAAGCTAGCACATC 700
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GCTCTGGAACCTCTCCGGACATCTCAGAGAATATCTGATTCACTAC 850
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CAAGGACTTTATTATCATCATGACAACTTTTGTATCTCTTGGCTCGTGTG 100
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TTAAGGATTAAAGAGAGTACTGACGAAACAAATTGTGCAACCTTAAAGTT 1100
TCTGGAATAATTTGAACCTCTTAAGGAAGATCTCAACATGTTTATCTGA 1150
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TTCCCATTTACCAGAAAGAAGATGATGCTTATCAAGAAGAGGTCTCTGAT 1500
TTACATGAGAACATTTCCAAGAACAGAGGTCTCATCGTTGTGAACCTCC 1550
CAAGAAACAGTTGAGAGCAAGTCATTGACAACCTGATAAAAATTTGTAG 1600
GTTTTGGTGAGGAGACAACTTGATACTTAGAAAGCTCACCAGTGGACCG 1650

Figure 13A (cont.)

GCAGATCTAGATGTCATTTTCGATCATTTGGTATGCCGGGTTTAGGTAAAC 1700
TACTTTGGCGTACAAAGTATACAATGATAAATCAGTTTCTAGCCATTTTCG 1750
ACCTTCGTGCATGGTGCACGGTCGACCAAGTATATGACGAGAAGAAGTTG 1800
TTGGATAAAATTTTCAATCAAGTTAGTGACTCAAATTCAAAATTGAGTGA 1850
GAATATTGATGTTGCTGATAAACTACGGAACAATTTGTTGGAAAGAGGT 1900
ATCTTATTGCTTAGATGACGTGTGGGATACTAATACATGGGATGAGCTA 1950
ACAAAGACCTTTTCTGATGGTATGAAAGGAAGTAGAATTATTTTGACAAC 2000
TCGAGAAAAGAAAGTTGCTTTGCATGGAAGCTCTACACTGATCCTCTTA 2050
ACCTTCGATTGCTAAGATCAGAAGAAAGTTGGGAGTTATTAGAGAAAAGG 2100
GCATTTGGAAACGAGAGTTGCCCTGATGAACATTGGATGTTGGTAAAGA 2150
AATAGCCGAAAATTGTAAAGGGCTTCCTTTGGTGGTGGATCTGATTGCTG 2200
GAATCATTGCTGGGAGGGAAGAAAAGAGTGTGTGGCTTGAAGTTGTA 2250
AATAATTGCAATTCCTTTATTTTGAAGAATGAAGTGAAGTGATGAAAGT 2300
TATAGAAATGAAGTTATGACCACCTTACCTGATCACCTGAAGCCATGCTTGC 2350
TGTACTTTGCAAGTGCGCCAAGGACTGGGTAAACGACAATCCATGAGTTG 2400
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TGGTAATTGTTTCAATGAGATAGGTGATTACCTACTTGCCAACTTCAT 2550
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GCATTGATTATGATGATGATGAAGAGCACTTGGGCTTAATTTTGTCTTG 2700
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TGCTTGTCTTCTTTGATATGGATGCAGATGAATCAATACTGATAGCAG 3100
AGGACACAAAGTTAGAACTTGACAGCATTAGGGGAACCTCGTCTTTCC 3150
TATTGGAAGATACAGAGGATATTTCAAAGGCTTCCCAATCTTCAAGT 3200
GCTTCATTTCAACTCAAGGAGTCATGGGATTATTCAACAGAGCAATATT 3250
GGTTCGCCGAAATTGGATTTCCTAAGTGAACTAGAAAACTCACTGTAGAT 3300
TTTGAAGATCAAAACAAAATGACAGTGGGTCTCTGACGCCATAAATCG 3350
GCCATGGGATTTTCACTTTCCTTCGAGTTTGAAGAGATTGCAATTGCATG 3400

Figure 13A (cont.)

```
AATTCCTCTGACATCCGATTCACTATCAACAATAGCGAGACTGCTGAAC 3450
CTTGAAGAGTTGTACCTTTATCGTACAATCATCCATGGGGAAGAAATGGAA 3500
CATGGGAGAAGAAGACACCTTTGAGAATCTCAAATGTTTGATGTTGAGTC 3550
AAGTGATTCTTTCCAAGTGGGAGGTTGGAGAGGAATCTTTTCCACGCTT 3600
GAGAAATTAGAACTGTCGGACTGTCATAATCTTGAGGAGATTCCGCTAG 3650
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AACTTGAAAAATCCGCTCTCAAGATTAAGGAATATGCTGAAGATATGAGG 3750
GGAGGGGACGAGCTTCAGATCCTTGGCCAGAAGGATATCCCGTTATTTAA 3800
GTAG 3804
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Figure 13B

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T TTGATAGAGTGAAGCTGTAAAGTATTGAATTGTAGATATCATGTGGCTTT 100
AAAAATTTGATATGTGTTATTTTGGCAGSAGTCATTTTCTGCTCTTCGCA 150
AGGATGCTGCCAATGTTCTGGATTCTCTAGAGAGATTAAAGAAATGAAGAA 2001
GATCAAAAGGCTGTTGATGTGGATCTGATTGAAAGCCTGAAATTTGAAGCT 2501
GACATTTTATTTGTACATATGTCAGCTTTCTTATTCCGATTGTGGAGAAGT 3001
TTGAAGATATAATGACTAGAAAAAGACAAGAGGTTGAGAATCTGCTTCAA 3501
CCAAATTTGGATGATGATGGCAAAGACGTCGGGTGTAAATATGTCCTTAC 4001
TAGCCTCGCCGGTAATATGGATGACTGTATTAAGCTTGTATCATCGTTCTA 4501
AATCAGATGCCACCATGATGGATGAGCAATTGGGCTTCCTCTCTTTGAAT 5001
CTCTCTCATCTATCCAAGCATCGTCTGAAAGATGTTTCCCTGGAGTGAC 5501
TCAATATGAGGTTCTTCAGAATGTATGTGGCAACATAAGAGATTTCCATG 6001
GATTGATAGTGAATTGTTGCATTAAGCATGAGATGGTTGAGAATGCTTAA 6501
TCTCTGTTTCAACTGATGGCTGAGAGAGTAGGACGCTTCCTTTGGGAGGA 7001
TCAGGCTGATGAAGACTCTCAACTCTCCGAGCTAGATGAGGATGATCAGA 7501
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GTTCCAACCTGAATTGGAGGTTATGCACATATGTTATAAACTTTGAAAGC 8501
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CTCCGGACATTTCTAGAGAAATATCTGATTCACTACAAAGACATATGATA 9510
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GAGGTATCAACTCTGTACGCGACTTGGGAAGAGAAATTAAAGATTAAAGA 1150
GAGTACTGACGAAACAAATTGTGCAACCCTAAAGTTTCTGGAAAAATATTG 1200
AACTCCTTAAGGAAGATCTCAAAATGTTTATCTGAAAGTCCCGGATTCA 1250
TCTCAATATTGCTTCCCATGAGTGATGGACCTCTCTTCATGCATCTGCT 1300
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TGATAAAGGAACAAATTGGGCTGGTGAAAGAAGACTTGAATTTCATAAGA 1400
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TGTTCTAGATGTGGCATATGAGGCAAAAGATGTCATAGATTCAATTATTG 1500
TTCGAGATAATGGTCTCTTACATCTTATTTTCTACTTCCCATTAACAGA 1550
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Figure 13B (cont.)

AGAGCAAGTCATTGACAACTGATAAAATAATTGTAGGTTTGGTGAGGAG 1700
ACAAACTTGATACCTTAGAAAGCTCACAGTGGACCGGCAGATCTAGATGT 1750
CATTTGCATCATTGGTATGCCGGGTTTAGGTAAAACTACTTTGGCGTACA 1800
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TGCACGGTCGACCAAGTATATACGAGAAGAAGTTGTTGGATAAAATTTT 1900
CAATCAAGTTAGTGACTCAAATTCAAAATTGAGTGAGAATATTGATGTTG 1950
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TTGCTTTGCATGAAAGCTCTACACTGATCCTCTTAACCTTCGATTGCTA 2150
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CAGAAGTTAAATCTCTGCTTTGTCTTCTCAAACCTCTGGAATCTAGAA 3050
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TTGGGATCTTGTAAGTTGCAAGTGCTGTTACGACTGCTTGTCTTTCT 3150
TTGATATGGATGCAGATGAATCAATCTGATAGCAGAGGACACAAAGTTA 3200
GAGAACTTGACAGCAATTAGGGGAACCTCGTGTCTTCTTATTGGAAAGATAC 3250
AGAGGATATTTTCAAAGGCTTCCCAATCTTCAAGTGCTTCATTTCAAAC 3300
TCAAGGACTCATGGGATTATTCAACAGAGCAATATTGTTTCCGAAATTTG 3350
GATTTCTTAAGTGAACCTAGAAAACTCACTGTAGATTTTGAAAGATCAA 3400

Figure 13B (cont.)

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CACAAATGACAGTGGGTCTCTGCAGCCATAAAATCGGCCATGGGATTTTC 3450
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CCTTTATCGTACAATCATCCATGGGGAGAATGGAACATGGGAGAAGAAG 3600
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AAGTGGGAGGTTGGAGAGGAATCTTTTCCACGCTTGAGAAATTAGAACT 3700
GTCGGA CTGTCATAATCTTGAGGAGATTCCGCTAGTTTTGGGGATATTT 3750
ATTCCTTGAAAATTATCGAACTTGTAAGGAGCCCTCAACTTGAAAATTCC 3800
GCTCTCAAGATTAAGGAATATGCTGAAGATATGAGGGGAGGGGACGAGCT 3850
TCAGATCCTTGGCCAGAAGGATATCCCGTTATTTAAGTAG 3890
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Figure 13C

GATCTAGAATCACCGAACCTCCCCTCGGTACAGCTCCTCCAGTTCTACCA 50
TGAATTTTCATCCACTGATTCCTCTTCAATCGCCATTGCAGATTCTCTCGA 100
TCTATGCTCAAAAAATCCCGAGATAAAACCCTAGATCTGCTTCAAATGCT 150
CTGATACCATGTAAATTCAGTGAATCTTAACATAACCAATGGAGAGAATTA 200
ACTATTTTAGAAAGACTGATTGAAGGAGAAGAAGAGAGAAAAATTTCTATA 250
TTGAACTCATGAACCAAAATGAATGAAAAAATAATGAGAAGAACTATAC 300
TATTACAATCTATATATCTCTATTATATCTAATCTGAAGCAGTTAATT 350
TAACTGACTCTAACACTAGACTGATAGGTGTACATTTTCTGTTAGTGCA 400
CTGCAGTGCATTTAACTAACTGCTTAACATAAAGAATGTTGTTTGAACAT 450
CATTCGAATAGCTTCAATGAGAAGCAACATGTGTACCTGTAAGACACA 500
CAGTAAAAGTGTTAATAATGAATAAATATGAATAATCAATAATAAATT 550
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AATTAAACAAAGACCCCTTGTAATTTAAGTCTGTAATTGAAAAATTGAGT 650
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TATTCCTCTGTTTATTCCAGAATTTTGAGCTCTATACATCTAATAACAA 850
AGCAAGCAGAGGATATATAGTTTCATCAACTAAAAAGGTAGTCAACTCA 900
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GGTTGGAGAGTGTGGAGTGAACAGAAGCAGATGTTTAGATTTTTCTAA 1250
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GATTATTCTTATCATTTCTCTCTTCTCTGATAAAGTTTATGTACT 1500
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AAAACGAAAAGATAATGAAGAAGCAACCACTCATTTGGTATGTTATTGGA 1600
TAGAGTGAACGTAAAGTATTGAATTGTAGATATCATGGCTTTAAAAA 1650

Figure 13C (cont.)

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GCTGCCAATGTTCTGGATTTCCTAGAGAGATTAAGAATGAAGAAGATCA 1750
AAAGGCTGTTGATGTGGATCTGATTGAAAGCCTGAAATTAAGCTGACAT 1800
TTATTTGTACATATGTCAGCTTTCTTATTCCGATTGGAGAGATTGAA 1850
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TTTGGATGATGATGGCAAGAGCTCGGGTGTAAATATGTCCTTACTAGCC 1950
TCGCCGGTAATATGGATGACTGTATAAGCTTGATCATCGTCTTAAATCA 2000
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AGAACAGAGGTCTCATCGTTGTGAACCTCCTCCAAGAACCACTTGAGAGC 3200
AAGTCATTGACAACGTATAAAATAATTGTAGGTTTGGTGAGGAGACAAA 3250
CTTGATACTTAGAAAGCTCACCAGTGGACCGGCAGATCTAGATGTCAATT 3300
CGATCATTTGGTATGCCGGGTTTAGGTAAAACTACTTTGGCGTACAAAGTA 3350
TACAATGATAAATCAGTTTCTAGCCATTTTCGACCTTCGTGCATGGTGCAC 3400

Figure 13C (cont.)

GGTCGACCAAGTATATGACGAGAAGAAGTTGTTGGATAAAATTTTCAATC 3450
AAGTTAGTGACTCAAATTCAAAATTGAGTGAGAAATATTGATGTTGCTGAT 3500
AAACTACGGAACAATTGTTTGGAAAAGAGGTATCTTATTGTCTTAGATGA 3550
CGTGTGGGATACTAATACATGGGATGAGCTAACAGACCTTTTCCTGATG 3600
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TTGCATGGAAAGCTCTACACTGATCCTCTTAACCTTCGATTGCTAAGATC 3700
AGAAAGAAAGTTGGGAGTTATTAGAGAAAAGGGCATTGGAACGAGAGTT 3750
GCCCTGATGAACATATTGGATGTTGGTAAAGAAATAGCCGAAAAATTGTAAA 3800
GGGCTTCCTTTGGTGGTGGATCGATTGCTGGAATCATTGCTGGGAGGGA 3850
AAGAAAAAGAGTGTGTGGCTTGAAGTTGTAATAAATTCATTCCTTTA 3900
TTTTGAAGAATGAAGTGGAGTGATGAAAGTTATAGAAATAGTTATGAC 3950
CACTTACCTGATCACCTGAAGCCATGCTTGCTGTACTTTGCAAGTGCGCC 4000
GAAGGACTGGGTAACGACAATCCATGAGTTGAAACTTATTTGGGGTTTG 4050
AAGGATTTGTGGAAGAGACAGATATGAAGAGTCTGGAAGAAGTGGTGAAA 4100
ATTTATTTGGATGATTAAATTTCCAGTAGCTTGGTAATTTGTTCAATGA 4150
GATAGGTGATTACCTACTTTGCCAAGTTCATGATCTTGTGCATGACTTTT 4200
GTTTGATAAAAAGCAAGAAAGGAAAAGTTGTGTGATCGGATAAGTTCAGT 4250
GCTCCATCAGATTTGTTGCCACGTCAAATTAGCATTGATTATGATGATGA 4300
TGAAGAGCACTTTGGGCTTAATTTTGCTCTGTTGGTTCAAATAAGAAAA 4350
GGCATTCCGGTAAACACCTCTATTTCTTTGACCATAAATGAGAGTAGCTG 4400
GACGACCATCTTTCTGATACATTTTCATCTAAGACACTTGAGGCTTCTTAG 4450
AACCTTGACACCTGGAATCCTCTTTTATCATGGTTAAAGATTCTTTGCTGA 4500
ATGAAATATGCATGTTGAATCATTGAGGTACTTAAGCATTGGGACAGAA 4550
GTTAAATCTCTGCCTTTGTCTTTCTCAAACCTCTGGAATCTAGAAATCTT 4600
GTTTGTGGATAACAAGAATCAACCTTGATACTATTACCGAGAATTGGG 4650
ATCTTGTAAGATTGCAAGTGCTGTTACGAGCTGCTTGTTCTTTCTTTGAT 4700
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CTTGACAGCATTAGGGGAAGCTGCTTTCTTCTATTGGAAGATACAGAGG 4800
ATATTTTCAAAGGCTTCCCAATCTTCAAGTGCTTCAATTTCAAACCTCAAG 4850
GAGTCATGGGATTATTCAACAGAGCAATATTGGTTCCCGAAATGGATTT 4900
CCTAACTGAACTAGAAAACTCACTGTAGATTTTGAAAGATCAAAACAAA 4950
ATGACAGTGGGTCTCTGACGCCATAAATCGGCCATGGGATTTTCACTTT 5000
CCTTCGAGTTTGAAAAGATTGCAATTGCATGAATTTCTCTGACATCCGA 5050
TTCCTATCAACAATAGCGAGACTGCTGAACCTTGAGAGTTGTACCTTT 5100
ATCGTACAATCATCCATGGGGAAGATGGAACATGGGAGAAGAGACACC 5150

Figure 13C (cont.)

TTTGAGAAATCTCAAAATGTTTGATGTTGAGTCAAGTGATTCCTTCCAAGTG 5200
GGAGGTTGGAGAGGAATCTTTCCACGCTTGAGAAATTAGAACTGTCGG 5250
ACTGTCATAATCTTGAGGAGATTCCGCTAGTCTTTGGGGATATTTATTC 5300
TTGAAAATTATCGAACTTGTAAGGAGCCCTCAACTTGAAAATTCGCTCT 5350
CAAGATTAAGGAATATGCTGAAGATATGAGGGGAGGGGACGAGCTTCAGA 5400
TCCTTGCCGAGAAGGATATCCGTTATTTAAGTAGTTTTTTGAGCATTATG 5450
GTTGAAAAGTAGATTGCACTTTGCTGGGTAGATTGTATATGGTTAAGAAA 5500
ATTCTGTTACAGTTGTTATGAAACATTTTTATTGACTTTTCTGAGTTTC 5550
TTTGTAGAAACTCAGAAGTTTTTAACAAAAATTATAGTTTTTATAAATAC 5600
AATGTGGATTTGCTTTGGCTGTCCAACCTTGGTCTGAAGTCTCATATGCT 5650
CAGAGCACTATCGTTCAACCTCAATCAAGGTACTGATTTAAAATGACATC 5700
TATACTACTTTATCACAAACCCAACGAACCTTCATCTCAAAGCTAGGCC 5750
AGGAAGTGAAGAGGTTGTAGAGAGCTTATAAGCACTCATGACTTCCTTTT 5800
CTCGAACATTCAACCAACGTAGGCTGAAATCCCACTCTGAACGAAAATAA 5850
GTGTTTGTTTATCAAAATAACTCTCGTAGTAGAACAACCTGAAATACCTTCT 5900
TCTAAACGTTCAACAAATGGGATTTCCAGCACTCAAAGTGAATGAAAGGT 5950
TCACATTAATCTTCAAAAAGAATTACGACAATTCATGACCACAAGTACAT 6000
TGACAGCACCATTCAACAGAAGACAAGTCAATGCTGCATCTTCATCAA 6050
TAATCCGAGTGTCGAACCTCCTCTCTGACACTGTCTGTATATGTAAAGT 6100
TTCTCAACAGGSCAACTTTCTGGTCTCGTATCTGGATGACCCCTCTCGTC 6150
TATAACTTCAACATTAAAGCCCTGGCAACTTCTGGACCAACAGCTTACATG 6200
CTTCAAACTTACTGAACAATTAGACATCCAAAGGGATCGCATTTGTCTCC 6250
AGCTTTGCAGCATTTAGCCAACAGAGCCTCATCGCCAAAGGGGAGTCTCT 6300
AATCTCGAATTTGAAAAAATTTGTTGTTGTATGACTTTCCTCTGACATCCG 6350
ATGCACTATCAACAATAGCAAGACTGGAGGTTGGAGGAGGAATCCTTTATT 6400
ATACAATCATTGAGGAGAGAAGATGGAACATGGGGGAGGAGACACTTTT 6450
GAGAATCTGAAATGTGTTAGAGCCACAAGCTACAGAAGTATTGAATTTGT 6500
CATGAATATCAACATTCTTCATCTAGTTAATTCTTTTCAATTTTTAAT 6550
AGACTCTCATTTTAACTACTAATATTCTTCTATTTGTGACTTCTTTTCTG 6600
CAGGTGGCAACTTTAAATTCAATAAGTATAGGATTGATGACAACTCGAA 6650
AAATATCTTAATGAGGTGAAGTTTGAGCAGTCAGCAGATGTTGGTTCCAA 6700
CTCTAAGTTGACAAGCACATACTATCCGGAGGGCGATTTCAAGCCTGAT 6750
GCATATGTTAGTGTGGCTAGAGCAGACAGGATGTATTACCTGGATATCT 6800
ACCAAGACGAATCCACAATCAGTTTTTATGTCAAGCAATACATGAAGTAAC 6850
TCCCGATAGAACAGTAAAGCAAGATGTGTAGGTGTATCTCGACTCTAAG 6900

Figure 13C (cont.)

AGATTGTACATTCTCTTTGAGATTTTACTGCTAATACAAATTACACC 6950
TCAGAAGCGAATCTAGAATTTCTAGAGCATGAATGCACCATAATGAAAG 7000
GAGAAAAAGGAAGTATGAAGTGGGAATTTGATCCTTGTTTCTAGGTATA 7050
TAAATTTTATCATTTCACTATACTTTCATTAGCAACAACTCTCTTTGCC 7100
ATTATTTCTCAAAACAGGGCTTCTAATATTGCTAAACTAAAGACTGTCAA 7150
AAGGTAAGTTCATCTTCAAACCTCTCTTGTTTACTTTTATCTAAAGGGGAAC 7200
TATGAAAAACAAGAAACATCAGGAATGTCCTGTAACAAAGCAGCCTCAT 7250
GCACAAAACATCCAACGTTGGTAGGATTAATGGAGGGATCGCATCCCAGG 7300
AGGATACTGTAGAAAAATTAGTGGCTTCTTTCACCGCTCAACCCATGAT 7350
CTATAGGTTACATGGAGACAACCTTTATGGTTGCTCGTAGGCTCCCGTCAA 7400
TTCTCATAAACCAACACCAAGTTGCATCAGACATCATCTTCATTAC 7450
AAGCTGACAATCTCCACAAGTCTTAGTCAACTTGTAATATGAATATTAGC 7500
CAGGTAGACGTACATATTTACAAAATTGAGTTTCTATATAATATGGTTT 7550
GAAGGAATGAAACATGATGGGGAGGGTAGATAAAATAATATATGAGGCAT 7600
AAAAATAGGAAAGATATTTGTAGTGAGAGGTTTTGACTTTTTTATGCTGCT 7650
TTTGATCTTCAGTTTCTGTATTCTTTTCTACTGCTTCTCTTCTTTC 7700
TCCTGAGTAAAGTTTATGTAGGTACTTTTATACGTCCGATCGTGAGAA 7750
CTTGAAAGAAAGCTCTCTATAGCTATGTTAGTGCCACATAAAAAATG 7800
AATATATCAAAAAACCTGATAATAAAATACACTAATCTAAGATATTCAC 7850
TGCAACATACATGCAAAATATATATATAAAATTTTCATGAAATATATAA 7900
CAATAATAGATGTGAACATATAACTTTAAAAATAATATTACATCCATAA 7950
AGCTTAAATCTAGATC 7967

Figure 13D

GATCTGCTTCAAATGCTCTGATACCATTGTAATTCAGTGAATTCCTAACTA 50
AACAAATGGAGAGAATTAACTATTTTAGAAAAGACTGATTGAAGGAGAAGAA 100
GAGAGAAAAATTCATATTTGAACTCATGAACCAAAATGAATGAAAAAAT 150
AATGAGAAAGAACTATATCTATTACAATCTATATATCTCTATTATATCTTA 200
ATCTGAAGCAGTTAATTTAACTGACTCTAACCACTAGACTGATAGGTGTA 250
CATTTTCTGTTAGTGCCTGCAGTGCATTTAACTAACTGCTTAACATAAA 300
GAATGTTGTTGCAACTTCATTCGAATAGCTTCAATGAGAAGCAACATGT 350
GTACCTGTAAGACACACAGTAAAAGTGTAAATAATGAATAAATATGAAT 400
AAATCAAAATATAAATTAATAAATAAAGACACATCAATTACATTGGAGG 450
TCTTGAATAATCGATGGTAATTAACAAAGACCCCTTGGAATTTAAGTCTG 500
TAATTGAAAAATTTGAGTATAGGTTAGGGACATTTGACTATTTTCTCATT 550
TTCTTTATCTTTTTCTTAATTTGTGCAGACAAGTGAGGAGGCCCACTG 600
TAATTGATTCATGCTTTTGTCTTCTTGACTTTTGGAACTACTATGCA 650
TCATATTTGGTCTTAATTTATCTCTGTTTATTTCCAGAATTTTGAGCTC 700
TATACATCTAATAACAAGCAAGCAGAGGATATATAGTTTCATCACTAA 750
AAAGGTTAGTCAACTCATCTAATATTTGCTACTCTCATCTCTATTGAAGT 800
ACAGTTATGGAAGTAGAAGTGATGTAAGAAAAATGAAAGAAGCTTTAGT 850
AGGTTAGTTGGATCTAACAAAGAGAAAGGGAATAAATTGCAGGAGAAG 900
AGAGAGGTTAAATACTTACTCACACCACCGATTTACAACAAATCACTTAA 950
TTGTGGTTAGTTAATGTATACCTTCCACTCATTTAAATTAATTAATCACTA 1000
TGATAAGTTGATTAATTTGGTATTAATATCCGGTGCGGGTGAATTCCTTA 1005
CCGGTGAGAGGATGGGGTTGGAGAGTGTGGAGTGAACAGAAGCAGATG 1100
TTTTAGATTTTTCTAAGATGACGAAAGATTCCCTCACTAATGAAAAATA 1150
TATTACTATACGCTATTAGAGATAGAAAGGTTCCGTACCAGTTGGTCTCG 1200
TTTCTGGATGAACCCCATTTTTACAAGTCATTTTCTCAATTCAAATCGC 1250
AAGTGTACCTTTATCATCTCCCACTAATTAAGTCTCTTAAGTTCGCGTG 1300
AAAATAGTGAAATTAATGATTATTTCTTATCATTTTCATCTTCTTCTCCTG 1350
ATAAAGTTTTATGACTTTTTATGCATCAGGCTTGAGAACTTGGAAGG 1400
AAAAGTAGAATCATGGAAAAACGAAAAATAATGAAGAAGCAACAACCTC 1450
ATTGGTATGTTATTTGATAGAGTGAAGTGAAGTATTGAATTTGAGATA 1500
TCATGTGGCTTTAAAAATTTGATATGTGTTATTTTGGCAGGAGTCATTTT 1550
CTGCTCTTCGCAAGGATGCTGCCAATGTTCTGGATTTCCTAGAGAGATTA 1600
AAGAAATGAAGAAGATCAAAAGGCTGTTGATGTGGATCTGATGAAAGCCT 1650

Figure 13D (cont.)

GAAATTGAAGCTGACATTTATTTGTACATATGTCAGCTTTCTTATTCGG 1700
ATTTGGAGAAGTTTGAAGATATAATGACTAGAAAAAGACAAGAGGTTGAG 1750
AATCTGCTTCAACCAATTTTGGATGATGATGGCAAAGACGTCGGGTGTAA 1800
ATATGTCCTTACTAGCCTCGCCGGTAAATATGGATGACTGTATAAGCTTGT 1850
ATCATCGTTCTAAATCAGATGCCACCATGATGGATGAGCAATTGGGCTTC 1900
CTCCTCTTGAATCTCTCATCTATCCAAGCATCGTGCTGAAAAGATGTT 1950
TCCTGGAGTGACTCAATATGAGGTTCTTCAGAATGTATGTGGCAACATAA 2000
GAGATTTCCATGGATTGATAGTGAATTTGTCATTAAAGCATGAGATGGTT 2050
GAGAATGCTTATCTCTGTTTCAACTGATGGCTGAGAGAGTAGGACGCTT 2100
CCTTTGGGAGGATCAGGCTGATGAAGACTCTCAACTCTCCGAGCTAGATG 2150
AGGATGATCAGAATGATAAAGACCTCAACTCTTCAAGCTAGCACATCTA 2200
CTCTTGAAGATTGTTCCAACCTGAATTGGAGGTTATGCACATATGTTATAA 2250
AACTTTGAAAGCTTCAACTTCAACAGAAATTTGACGCTTCATTAAGAAGC 2300
TCCTGGAAACCTCTCCGGACATCTCAGAGAATATCTGATTCATCTACAA 2350
GAGCATATGATAACTGTTATTACCCCTAACACTTCAGGGGCTCGAAACAT 2400
TCATGTCATGATGGAATTCCTATTGATTATCTTTCTGATATGCCGCCCA 2450
AGGACTTTATTCATCATGACAAACTTTTTGATCTCTTGGCTCGTGTGTA 2500
GCACCTACCAGGAGGTATCAACTCTTGTACGCGACTTGGAGAGAAATT 2550
AAGGATTAAAGAGAGTACTGACGAAACAAATTTGCAACCCCTAAAGTTTC 2600
TGGAAAATATTGAACCTCCTTAAGGAAGATCTCAAACATGTTTATCTGAAA 2650
GTCCCGGATTCACTCAATATTGCTTCCCCTGAGTGATGGACCTCTCTTT 2700
CATGCATCTGCTACAGAGACACTTAGATGATTTGCTGGATTCCAATGCTT 2750
ATTCAATTGCTTTGATAAAGGAACAAATTTGGGCTGGTGAAGAGACTTG 2800
GAATTCATAAGATCTTTTTTCGCGAATATTGAGCAAGGATTGTATAAGA 2850
TCTCTGGGAACGTGTTCTAGATGTGGCATATGAGGCAAAAGATGTCATAG 2900
ATTCAATTATTGTTTCGAGATAATGGTCTCTTACATCTTATTTTCTCACTT 2950
CCCATTACCAGAAAGAAGATGATGCTTATCAAAGAAGAGGTCCTGATTT 3000
ACATGAGAACATTTCCAAGAAGAGAGGTCTCATCGTTGTGAACCTCCCA 3050
AGAAACACGTTGAGAGCAAGTCATTGACAACTGATAAAATAATTTAGGT 3100
TTTGGTGAGGAGACAACTTGATCTTAGAAAAGCTCACCAGTGGACCGGC 3150
AGATCTAGATGTCATTTTCGATCATTGGTATGCCGGGTTAGGTAAAACCTA 3200
CTTTGGCGTACAAAGTATACAATGATAAATCAGTTTCTAGCCATTTGAC 3250
CTTCGTGCATGGTGCACGGTCGACCAAGTATATGACGAGAAGAGTTGTT 3300
GGATAAAATTTTCAATCAAGTTAGTGACTCAAATTCAAAATTTGAGTGAGA 3350
ATATTGATGTTGCTGATAAACTACGGAACCAATTGTTTGGAAAGAGGTAT 3400

Figure 13D (cont.)

CTTATTGCTTTAGATGACGTGTGGGATACTAATACATGGGATGAGCTAAC 3450
AAGACCTTTTCCTGATGGTATGAAAGGAAGTAGAATTATTTGACAACATC 3500
GAGAAAAGAAAGTTGCTTTGCATGAAAGCTCTACACTGATCCTCTTAAC 3550
CTTCGATTGCTAAGATCAGAGAAAGTTGGGAGTTATTAGAGAAAAGGGC 3600
ATTTGGAACGAGAGTTGCCCTGATGAACATTATGGATGTTGGTAAAGAAA 3650
TAGCCGAAAATTGTAAAGGGCTTCCTTTGGTGGTGGATCTGATTGCTGGA 3700
ATCATTGCTGGGAGGGAAAAGAGAGTGTGTGGCTTGAAGTTGTAAA 3750
TAATTTGCATTCTTTATTTTGAAGAATGAAGTGAAGTATGAAAGTTA 3800
TAGAAATTAAGTTATGACCACTTACCTGATCACCTGAAGCCATGCTTGCTG 3850
TACTTTGCAAGTGCGCCGAAGGACTGGGTAACGACAATCCATGAGTTGAA 3900
ACTTATTTGGGGTTTGAAGGATTGTGGAAAAGACAGATATGAAGATC 3950
TGGAAGAAGTGGTGAAAATTATTTGGGATGATTAATTTCCAGTAGCTTG 4000
GTAATTTGTTTCAATGAGATAGGTGATTACCCTACTTGCCAACCTTCATGA 4050
TCTTGTGCATGACTTTTGTGTGATAAAAGCAAGAAGGAAAAGTTGTGTG 4100
ATCGGATAAGTTCAAGTGCTCCATCAGATTTGTGTGCCACGTCAAATTAGC 4150
ATTGATTATGATGATGATGAAGAGCACTTTGGGCTTAATTTGTCCTGTT 4200
CGGTTCAAATAAGAAAAGGCATTCCGGTAAACACCTCTATTCTTTGACCA 4250
TAAATGGAGATGAGCTGGACGACCATCTTTCTGATACATTTCATCTAAGA 4300
CACTTGAGGCTTCTTAGAACCTTGACCTTGAATCCTCTTTATCATGGT 4350
TAAAGATTCTTTGCTGAATGAAATATGCATGTTGAATCATTTGAGGTACT 4400
TAAGCATTGGGACAGAAGTTAAATCTCTGCCTTTGTCTTTCTCAAACCTC 4450
TGGAATCTAGAAATCTGTTTGTGGATAACAAAGAAATCAACCTTGATACT 4500
ATTACCGAGAATTGGGATCTTGTAAGATTGCAAGTGCTGTCACGACTG 4550
CTTGTTCTTTCTTTGATATGGATGCAGATGAATCAATACTGATAGCAGAG 4600
GACACAAAGTTAGAAACTTGACAGCATTAGGGGAACCTCGTGCTTTCCCTA 4650
TTGGAAAGATACAGAGGATATTTCAAAGGCTTCCCAATCTTCAAGTGC 4700
TTCATTTCAAACCTCAAGGAGTCATGGGATTATTTCAACAGAGCAATATTGG 4750
TTCCCGAAATTGGATTTCCTAACTGAACATAGAAAACCTCACTGTAGATT 4800
TGAAGATCAAAACAAATGACAGATGGGTCTCTGACGCCATAAATCGGC 4850
CATGGGATTTTCACTTTCCCTTCGAGTTTGAAAAGATTGCAATTGCATGAA 4900
TTTCCTCTGACATCCGATTCACTATCAACAATAGCGAGACTGCTGAACCT 4950
TGAAGAGTTGTACCTTTATCGTACAATCATCCATGGGGAAGAATGGAACA 5000
TGGGAGAAGAAGACACCTTTGAGAATCTCAAATGTTTGATGTTGAGTCAA 5050
GTGATTCTTTCCAAGTGGGAGGTTGGAGAGGAATCTTTTCCACGCTTGA 5100
GAAATTAGAAGTGTGCGACTGTCTAATCTTGAGGAGATTCCGTCTAGTT 5150

Figure 13D (cont.)

TTGGGGATATTTATTCCTTGAAAAATTATCGAACTTGTAAGGAGCCCTCAA 5200
CTTGAAAAATCCGCTCTCAAGATTAAAGGAATATGCTGAAGATATGAGGGG 5250
AGGGGACGAGCTTCAGATCCTTGCCAGAAGGATATCCCGTTATTTAAGT 5300
AGTTTTTGAGCATTATGGTTGAAAAGTAGATTGCACCTTGTGGGTAGAT 5350
TGATATATGGTTAAGAAAATTCTGTTACAGTTGTTATGAACATTTTTATT 5400
TGACTTTTCTGAGTTCTTTTAGAAAACCTCAGAAGTTTTTAACAAAAATT 5450
ATAGTTTTTATAAATACAATGTGGATTGGCTTTGGCTGTCCAACTTGGT 5500
CTGAAGTCTCATATGCTCAGAGCACTATCGTTCAACCTCAATCAAGGTAC 5550
TGATTTAAAAATGACATCTATACTACTTTATCACAACCCACGAACCTTC 5600
ATCTCAAAAGCTAGGCCAGGAAGTGAAGAGTTGTAGAGAGCTTATAAGC 5650
ACTCATGACTTCCTTTTCTCGAACATTCACCAACGTAGGCTGAAAATCC 5700
ACTCTGAACGAAAAATAAGTGTGTTGTTTATCAAATTAACTCTCGTAGTGA 5750
ACACTGAAATACCTTCTTCTAAACGTTCAACAAATGGGATTTCCAGCACT 5800
CAAAGTGAATGAAAGGTTACATTAACTCTCAAAAGGAATTACGACAATT 5850
CATGACCACAAGTACATTGACAGCACCATTTCACAGAAGAACAAGTCAA 5900
TGCTGCATCTTCATCAATAATCCGAGTGTCAACCTCCTTCTGACACTG 5950
TCCTGTATATGTAAAGTTTCTCAACAGGGCAACTTTCTGGTCTCGTATCT 6000
GGATGACCCCTCTCGTCTATAACTTCAACATTAAGCCCTGGCAACTTCTG 6050
GACCAACAGCTTACATGCTTCAAAACTTACTGAACAATTAGACATCCAAA 6100
GGGATCGCATTGTCTCCAGCTTTGCAGCATTAGCCAACAGAGCCTCATCG 6150
CCAAAGGGGCAGTCTCTAATCTCGAATTTGAAAAAATTGTTGTGTATGA 6200
CTTTCCTCTGACATCCGATGCACTATCAACAATAGCAAGACTGGAGGTG 6250
GAGAGGAATCCTTTATTATACAATCATTCAGGGAGAAGAAATGGAACATGG 6300
GGGAGGAAGACACTTTTGAGAATCTGAAATGTGTTAGAGCCACAAGCTAC 6350
AGAAGTATGAAATTTGTCATGAATATCAACATTCCTCATCCTAGTTAATT 6400
CTTTTTCGAATTTTAAAGAGCTCTCATTTTAAATCACTAATATCTCTAT 6450
TTGTGACTTCTTTTCTGCAGGTGGCAACTTTAAATTCAAAAGTATAGGA 6500
TTGATGACAACTCGAAAAATATCTTAATGAGGTGAAGTTTGAGCAGTCA 6550
GCAGATGGTGGTTCCAACCTCTAAGTTGACAAGCAGATACATATCCCGGAGG 6600
GCGATTTCAAGCCTGATGCATATGGTTAGTGTGGCTAGAGCAGACAGGAT 6650
GTATTACCTGGATATCTACCAAGACGAATCCACAATCAGTTTTATGTCAA 6700
GCAATACATGAAGTAACCTCCGATAGAACAGTAAAAGCAAGATGTGTAGG 6750
TGTATCTCGACTTAAGAGATTGTACATTCTCTTTGAGATTTTACTGC 6800
TAATACAAATTTACACCTCAGAAGCGAATCTAGAATTTCTAGAGCATGAA 6850
TGCACCCTAATGAAAGGAGAAAAAAGGAAGTATGAAGTGGGAATTTGAT 6900

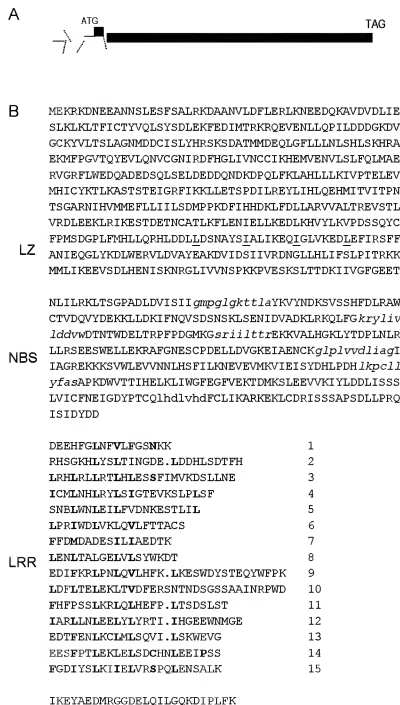
Figure 13D (cont.)

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CCTTGTTTCTAGGTATATAAAATTTATCATTCAACTATACTTCATTTAGC 6950
AAACAACTCTCTTTGCCATTATTTCTCAAACAAGGGCTCTAATATTGCT 7000
AAACTAAAGACTGTCAAAGGTAAGTTCATCTTCAAACCTCTCTGTTTAC 7050
TTTATCTAAAGGGGAACATATGAAAAACAAGAACATCAGGAATGTCCTGT 7100
AAACAAAGCAGCCTCATGCACAAAACATCCACGTTGGTAGGATTAATGG 7150
AGGGATCGCATCCAGGAGGATACGTAGAAAAATAGTGGCTTCTTTCA 7200
CCGCTCAAACCATGATCTATAGGTTACATGGAGACAACTTTATGGTTGC 7250
TCGTAGGCTCCCGTCAATTCTCATAAACACACACCAAAGTTGCATCAG 7300
ACATCATCTTCATTACAAAGCTGACAATCTCCACAAGTCTTAGTCAACTT 7350
GTAATATGAATATTAGCCAGGTAGACGTACATATTTACAAAATGAGTTT 7400
CCTATATAATATGGTTTGAGGAATGAAACATGATGGGGAGGTAGATAA 7450
AATAATATATGAGGCATAAAAAATAGGAAAGATATTTGTAGTGAGAGGTT 7500
TGACTTTTATGCTGCTTTTGATCTTCAGTTTCTTGATTTCTTTTCTAC 7550
TGCTTTCCTCTCTTCTCCTGAGTAAAGTTTATGTAGGTACTTTTAT 7600
ACGTCGATCGTGAGAACTTGAAGAAAGCTCTCTATAGCTATGTTAGGT 7650
GCCCACATAAAAAAATGAAATATTACAAAACCTGATAATAAAATACAC 7700
TAATCTAAGATATTCAGTGCAACATACATGCAAAATATATATATATAAAT 7750
TTTCATGAAAATTATAACAAATAATAGATGTGAACATATAACTTTAAAAA 7800
TAATATATACATCCATAAAGCTTAAATTTAGATCCATCTATGCTTGTATG 7850
ATGCATAGCTCAGAATATCTCCATCAAGTGTTAACTACATATTTCAATC 7900
AAATTTATATAGAAAAACGATAATTAAGGTGAAAACTTTTATAAAGATATC 7950
GTGTGGTTGTGTGAGTGAGGTGACAAAATAAGTTGTGTGATTATTCAAAA 8000
AGTTTAAATAACGAAAATCCACATGCTTGAATTAATTGAAGCATTAAATGT 8050
TGTAACGAAAAATATTACATTTATTGAGTTACTGTGATGTTTTAACTGAT 8100
ATATAAAATAATATTGGTATTCTCTTCATCTGCGACATAATATGTTTTT 8150
TCATCTTTTTTCAATATACAAAATAGAATTATTATTTTGTGTCATCTTT 8200
TAAGTACAAATTATTCATATGTATATAGTACAAAATAAAATATTACTGT 8250
GGTAAAGTAAATGGAATAAGAGGTCATATTTGAAATAACAATATACTATA 8300
CTATGTTAAAGTATTTTTTATAGTTAAAATTTCTCTAGAGTACTTGATTC 8350
TACATACAAATACTAATTTCTGTAATAAATAATATTAATTTGAATTTCTTCATT 8400
GTTTCTTTATTATTAATTAGTTTATAATAACTAAACTAAGGTAAATAAGA 8450
CCTTAGTTAGTTAATGTGTCTCTGTGATTTCTGTCATAGTCTAAGGG 8500
TGACTTGTGCTTATCCCAAAAATGAAGGAATATCAAAAGATATATTAA 8550
AATTAAATTAATATTGTGAGGTTATGAATATAAAAAGTATCAGAGTTCT 8600
ACATATAAAGAGTAACAATTGAAATAATTAAATTAATATGAGATATGAAG 8650
```

Figure 13D (cont.)

GCGGACATTTAAAGAAAATAATAATAAAATAAAATTAAGGGTATAAAATT 8700
CATAATACATAATACCAATAAGCCGTAGAATATCTCCGTCATAATGCATA 8750
AACTAATAAATCACAAATGTATAACTCACATACAAATATTTTGTATAAA 8800
GAATTTGAATGTTGTAATAGAAATGGAGATAACTTGTGTCTTATTCCATT 8850
ATGTAAGACGTATAAATACAAATACAATGAGCTCTAATTAATTAAGGAAA 8900
CTAAATAAGGAAGGAATCAAAAAATATTATGTCATATCCCTACATATCTG 8950
CTAGAGATTCTATCATATCCTTACATATCTGTTAAGCTATGCTACACCT 9000
AAAGGTGCTACAATCATTTTGTAACTCCCTCAAGTTAGAGCATAG 9050
ATATTATTCAATCCCACTTGTACAAAGATAATCAACTCGAGTTCCATT 9100
CAACGCTTTTGTGAACAAATCAACTAGTTGCTCTCCTGTCTTCACTTAGC 9150
TAGTGGATATCAGGTTTTCATGAATCTTCTACGAATAAAATGACAGTCA 9200
ACCTCAATATGTTTAGTTCTTTCATGAGACACCGGATTCAAGGCAATATG 9250
GAGCGCAACTTGATTATCATACTAGAGTTTGTATGGTATATGATGCTTCA 9300
ACCTATTTCTGTTAAAAGATAATGTATCCACATGATCTCACCATAGAC 9350
TGTAACATAACTCTGTACTTTGATTTCTGCACATAGATCAAGATACAACATT 9400
TTGCTTTTACTCTCCATGATACCAGGTTTCATCCAACAAGACACAAT 9450
AACTTGATAGATCTTCTATCAATTTTCGATCCAGCCCAATCGACATCT 9500
GCAAAACACTCAATATGAGTATGGTCGTGATTTTGATACTATATTCCAAG 9550
ACTAGGAGTTTCTTCAAGTAACATAGAATATGTTCCAAAGCTGCCAGT 9600
GTTTGACGTAGGTGCAACATGAACCTAGCTAACCAACTTACTGCAAAAG 9650
CAATATCAAGATGAGTCACAATAAGGTAGTTTAACTTTCCAACATAACCTT 9700
TTGTATCTCTATGGATCATTAAAAGGATCGTCGTCATCTTTCATAAGATG 9750
CATATTGGGAACCATTTGGAGAACTTCAGGGTTTGCTGCCATCTTCAAT 9800
TTTCTGCAAGTAGATCGAGAGAAATATATCTCTAAGACAAAAGAAATCCC 9850
TTTTTGTCTCTATTACTTCTACTCCCAAAATGATTTCAATTGACCCAA 9900
GTCTTTCGTATGAACCAAGTATGCAGGAAAGACTTGAGGGAAGAGATC 9949

Figure 14



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Mil.1          VL S I D V --- N L K QV KI MA
57
Mil.1          I VL S I I --- N L K QV KL MA
57
Rpi-blb2       MEKRRKNEEANNSSLESFSAIRKDAANVLDFLEAKNEEDQKAVDVDLIESLKLKLTFTICT
60

Mil.1          C F Q          L ----- F TS
109
Mil.1          Y F Q          N SL ----- TS
109
Rpi-blb2       YVQLSTSDLEKFDIMTRKRQEVENLLQFILLDDGKIVGCKYVLTSLAGNMDDCISLYHR
120

Mil.1          Y I D Y H I I G
169
Mil.1          Y I D Y H I L G
169
Rpi-blb2       S-KSDATMDEQLGFLLLNLSHLSKHRAEKFFGVQTQYEVLQNVCGNIRDPHGLIVNCCI
179

Mil.1          F D H D T R E R SR
229
Mil.1          F H T R EH R SR Q T
229
Rpi-blb2       KHEMVENVLSLFQLMAERVGRFLWEDQADEDSQLSELDEDDQNDQPLFKLAHLLKIV 239

Mil.1          V I TN A V L Q P V S
289
Mil.1          TN A V I Q L P S L
289
Rpi-blb2       PTELEVHHCYTKLKASTSTEIGRFINKLLETSPDILREYLHLQERHMITVITPWTSGAR
299

Mil.1          L - D GV EP N GNNQ
348
Mil.1          L - H GT N GNNQ
348
Rpi-blb2       NIHVMGEFLLIILSDMPFKDFIHMDKLFDLLARVVALTRVSTLVRDLEEKLRKESTDE
359

Mil.1          DL K AL C HI N
408
Mil.1          DL K A N C HM N
408
Rpi-blb2       TNCATLKFLENIELLKEDLKHVYLKVPDSSQYCFPMSEGLFPMHLLQRLHLDLIDRAYS
419

Mil.1          E E Q K VD-A A
467
Mil.1          S E E SQE GDAA I A
469
Rpi-blb2       TALIKEQIGLVKEDLEPIRSPFAN-IEQGLYKDLNWRVLDVAYEAKDVIDSIIVRDNOLL
478
-----
Mil.1          I IK I A D P D R T E
527
Mil.1          I IK I A D P D R I E
528
Rpi-blb2       HLIFSLPITRKKOMLIKEVSDLNENISKNRGLIVVHSPKXPVESKSLTTDKIIVGFGEE
538

Mil.1          S T S R GC
587

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FIGURE 15

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Mil.2		T	S		R		G	D
598								
Rpi-blb2	TNLIILAKLTSGPADLDVSIIGmpgIgtktleYKVVNDKSVSSKFDLRAMCTVQVYDEK							
598								
Mil.1		NT	S	D			T	ESK
647								
Mil.2		T	S	G	D	N	T	L
648								EAK
Rpi-blb2	KLLDKIFBQVSDSNKSLSENIDVADKLKQFGKrylivldgVwDTWTWDELTPFPDGM							
658								
Mil.1		E		N	D		PD	
707								
Mil.2		E		N	D		PD	D T
708								
Rpi-blb2	KGSRIILTREKKVALHGKLYTDPLNLRLLSESWELLEKRAFNGNESCPCDELLOVGKEI							
718								
Mil.1		A	V		R	QSS	S	NS
767								L H
Mil.2		A	V		R	QSS	S	NS
768								L H
Rpi-blb2	AENCKgpllvvdliegXlAGREKKKSVWLEVVSLHSFILKNEVEVMKVIESTYDLHPDH							
778								
Mil.1		F	TSL	Y	NVYF	A	G	EN M
827								N Y
Mil.2		H	W	TPL	YLFTVYL	A	E	GI
828								N
Rpi-blb2	lkpcilyfasAFKDWVTTIRELKLWGFEQFVEKTDKSLSEEVVKIYLEDLSSLVICF							
838								
Mil.1		YALNF	I			N F Q R		T C E E -
886								
Mil.2		ILNF	I			N F R		T E E
888								
Rpi-blb2	NEIGDYPTCQlhdlvhGFLIKARKEKLCDRISSAPSDDLPRQISIDYDDDEEHFGLNE							
898								LRR
Mil.1		M D		R I Q	SV A		V D HT	
946								
Mil.2		M D		R Q	SV A		I W D	P L N
948								
Rpi-blb2	VLEGSNKKRHSKMHVSLTNGEDLDLDDHLSDTFHLRHALLRYLLESSEPTMVKDSLNE							
958								
1								
Mil.1			D Q Y	2		S	STNR	V 3
1006								L R SVD
Mil.2			RR Q Y F			S	S G I V	L R SVG
1008								
Rpi-blb2	ICMLNHRLYSIGTEVYKSLPLSFNLRNLEYLFUNKESTLILLPRINDLHKLQVLETTA							
1018								
4								
Mil.1						RI T	LI S	KN F
1056								L S E
Mil.2			K			RI	LI S	MN F
1058								Q E
Rpi-blb2	CSTFDNDADSEILIAEDTKLENLALGRLVLSVMDTEDIFKRLLENLOVLHFKIKESMDY							
1078								
Mil.1		H	SE	7		T S G K S		V T
1126								N I W R
Mil.2		H	C			T C G K S	HC	VVT
1128								N E L YD

FIGURE 15 (cont.)

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Rpi-b1b2	STEQYWFPKLDFLT	ELKLT	QDEPR	SWTND	SGSSAA	INRFWD	FHP	SSLA	KRLQ	NEEP	L/T
1138											
				10						11	
M11.1		P	S	H				F	NFN	SI	
1186											
M11.2		P	N	S	D	Q			F	N	RLT
1188											
Rpi-b1b2	SDSLSTIARLLN	LELY	YRTI	IHGE	WNMG	EEDT	FENL	KC	ML	SOV	LSKWEVGEESFP
1198											
				12						13	
M11.1	N	K	R	G	K	P		S	KI	K	D
1246											
M11.2	N	K	Q	E	G	K	P		F	KI	K
1248											ND
Rpi-b1b2	TLK	KL	LS	DC	N	LE	IP	SS	FG	DI	YS
1258											
				14						15	
M11.1	N										1255
1257											
M11.2	N										1257
Rpi-b1b2	GQ	K	D	I	P	L	F	K			1267

FIGURE 15 (cont.)

Figure 16: Multiple Sequence Alignments of Mil.1.1, Mil.2 and Rpi-blb2 nucleic acids

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CLUSTAL W (1.82) Multiple Sequence Alignments

Sequence format is Pearson
Sequence 1: Mil.1 3768 bp
Sequence 2: Mil.2 3774 bp
Sequence 3: Rpi-blb2 3804 bp
Start of Pairwise alignments
Aligning...
Sequences (1:2) Aligned. Score: 95
Sequences (1:3) Aligned. Score: 89
Sequences (2:3) Aligned. Score: 89
Guide tree file created: [/ebi/extern/clusterw-
work/interactive/clusterw-20040503-14435620.dnd]
Start of Multiple Alignment
There are 2 groups
Aligning...
Group 1: Sequences: 2 Score:68908
Group 2: Sequences: 3 Score:65855
Alignment Score 66872
CLUSTAL-Alignment file created [/ebi/extern/clusterw-work/interactive/clusterw-
20040503-14435620.aln]

CLUSTAL W (1.82) multiple sequence alignment

Mil.1 ATGGAACGAAAGATATGAAGCAACCAACTCATGCTGCTATTTTCGCTCTT 60
Mil.2 ATGGAACGAAAGATATGAAGCAACCAACTCATGCTGCTATTTTCGCTCTT 60
Rpi-blb2 ATGGAACGAAAGATATGAAGCAACCAACTCATGCTGCTATTTTCGCTCTT 60
*****

```

Figure 16 (cont.)

M1.1	ACCAAGGACATTCGCGATGTTCTGGTTTCTCTAGAGA-----ATGAGGAAATCAA	111
M1.2	ACCAAGGACATTCGCGATGTTCTTAATTTTCTCTAGAGA-----ATGAGGAAATCAA	111
Rpl-blb2	CGCAAGGATCTGCGCAATGTTCTCGAATTCCTAGAGAGATTAAAGATGAGAGATCAA	120

M1.1	AAAGCTCTTGACAAAGATCAAGTTGAAAGATAAAATGAAAAATGGCAATTTATTGTACA	171
M1.2	AAAGCTCTTGACAAAGATCAAGTTGAAAGCTAAAATGAAAAATGGCAATTTATTGTACA	171
Rpl-blb2	AAGGCTGTTGATGTGATCTGATTGAAAGCTGAAATGGAAGCTGCACATTTATTGTACA	180
	**	

M1.1	TATGTTCAAGCTTCTTGTTCGGAATTTGACGAGTTTGAAGATATATATGACTAGAAAAAGA	231
M1.2	TATGTTCAAGCTTCTTGTTCGGAATTTGACGAGTTTGAAGATATATATGACTAGAAAAAGA	231
Rpl-blb2	TATGTCAGGCTTCTTGTTCGGAATTTGAGAGAGTTTGAAGATATATATGACTAGAAAAAGA	240

M1.1	CAAGAGGTTGAGAATCTGTTCAACCACTTTTGGATGATGATG-----	274
M1.2	CAAGAGGTTGAGAATCTGTTCAACCACTTTTGGATGATGATG-----	274
Rpl-blb2	CAAGAGGTTGAGAATCTGTTCAACCACTTTTGGATGATGATGCGCAAGACGTCGGGTGT	300

M1.1	-----TCTTTACTAGCCTCACCAAGTAATGAGTACTGTATCAGCTTGTATCATCGT	327
M1.2	-----TCTTTACTAGCCTCACCAAGTAATGAGTACTGTATCAGCTTGTATCATCGT	327
Rpl-blb2	AAATATGTCCTTACTAGCCTCACCAAGTAATGAGTACTGTATCAGCTTGTATCATCGT	360
	**	

M1.1	TCTTATAATCAGATGCCATCATGATGATGAGCAATGAGACTTCCTCCTCTTGAATCTC	387
M1.2	TCTTATAATCAGATGCCATCATGATGATGAGCAATGAGACTTCCTCCTCTTGAATCTC	387
Rpl-blb2	TCTT-----AAATCAGATGCCATCATGATGATGAGCAATGAGGCTTCCTCCTCTTGAATCTC	417

Figure 16 (cont.)

M1.1.1	TATCATCTATCCAAAGCATCACGCTGAAAAGATATTTCTCGAGTGAAGTCAATATGAAGTT	447
M1.1.2	TATCATCTATCCAAAGCATCACGCTGAAAAGATATTTCTCGAGTGAAGTCAATATGAAGTT	447
Rpl-b1b2	TCTCATCTATCCAAAGCATCTGCTGAAAAGATGTTTCTCGAGTGAAGTCAATATGAAGTT	477
	* ****	
M1.1.1	CTTCAGAAATATATGTGCGAACATAAAGAGATTTCCATGGGTTGATAGTGAATGGTTGCATT	507
M1.1.2	CTTCAGAAATATATGTGCGAACATAAAGAGATTTCCATGGGTTGATAGTGAATGGTTGCATT	507
Rpl-b1b2	CTTCAGAAATATATGTGCGAACATAAAGAGATTTCCATGGATTTGATAGTGAATGGTTGCATT	537

M1.1.1	AAGCATGAGATGGTTGAGAAATGCTTTCCTCTGTTTCAACTCATGCGCTGACAGAGTAGGA	567
M1.1.2	AAGCATGAGATGGTTGAGAAATGCTTTCCTCTGTTTCAACTCATGCGCTGAGAGAGTAGGA	567
Rpl-b1b2	AAGCATGAGATGGTTGAGAAATGCTTTCCTCTGTTTCAACTCATGCGCTGAGAGAGTAGGA	597

M1.1.1	CAGTTCCTTTGGGATGATCAGACTGATGAAGACTCTCGACTCTCCGAGCTAGATGAGGAT	627
M1.1.2	CAGTTCCTTTGGGAGGATCAGACTGATGAAGACTCTCGACTCTCCGAGCTAGATGAGGAT	627
Rpl-b1b2	CGGTTCTTTGGGAGGATCAGGCTGATGAAGACTCTCAACTCTCCGAGCTAGATGAGGAT	657
	* ****	
M1.1.1	GAACAAATGATAGAGACTCTCGACTTTTCAAGCTAGACATCTACTCTTTGAAGATCGTT	687
M1.1.2	GAACAAATGATAGAGACTCTCGACTTTTCCAGCTTAACACATCTACTCTTTGAAGATCGTT	687
Rpl-b1b2	GATCAGAAATGATAAAGACCTCAACTCTTCAAGCTAGACATCTACTCTTTGAAGATCGTT	717
	** **	
M1.1.1	CGGTTGACTCGAGGTTATACACATATGTTATACAACTTGAAGCTTCACTTCAGCT	747
M1.1.2	CCAACTGAATCGAGGTTATGCACATATGTTATACAAATTTGAAGCTTCACTTCAGCT	747
Rpl-b1b2	CGAACTGAATCGAGGTTATGCACATATGTTATACAAATTTGAAGCTTCACTTCAGCT	777
	** ****	
M1.1.1	GAAGTTGAGCTCTTTCATTAGCAGCTTCTAGAAACCTCTCCAGATATATTCGAGGGAATAT	807

Figure 16 (cont.)

M1.1.2	GAAGTTGAGCGCTTCATTAAAGAGCTCTCGAAACCTCACCGGATATTCTCAGAGATAT	807
Rp1-blb2	GAATTTGAGCGCTTCATTAAAGAGCTCTCGAAACCTCACCGGATATTCTCAGAGATAT	837
	*** ***** ** ** ** **	
M1.1.1	CTAATTCCTGCAAGAGCAGATGGTAACTGTTATTAACCCCTAGCACTTCAGGGGCTCGA	867
M1.1.2	ATCATTCACATCAAGAGCAGATGTTAACTGTTATTAACCCCTAGCACTTCAGGGGCTCGA	867
Rp1-blb2	CTGATTCATCTCAAGAGCAGATGATTAACCTGTTATTAACCCCTAGCACTTCAGGGGCTCGA	897
	* **** ** ***** ** ***** ** ***** ** ***** ** *****	
M1.1.1	AACATTCATGTCATGATGGAATTCCTATTACTTATCTTCTGATATGCC---CAGGGAC	924
M1.1.2	AACATTCATGTCATGATGGAATTCCTATTACTTATCTTCTGATATGCC---CAGGGAC	924
Rp1-blb2	AACATTCATGTCATGATGGAATTCCTATTGATTAATCTTCTGATATGCCGCCCAAGGAC	957
	***** ***** ** ***** ** ***** ** *****	
M1.1.1	TTTATTTCATGACACAACTTTTGTATCTCTTGGATCGTCTGGAGTACTTACAGGGAG	984
M1.1.2	TTTATTTCATGACACAACTTTTGTATCTCTTGGATCATGTTGGAACACTTACAGGGAG	984
Rp1-blb2	TTTATTTCATGACACAACTTTTGTATCTCTTGGATCGTCTGGAGTACTTACAGGGAG	1017
	***** ***** ** ***** ** ***** ** *****	
M1.1.1	GTATCAACTCTTGTACGTGATTTGGAAGAGGAAACCAAGGAAATAAGAGGGTAAATACCAA	1044
M1.1.2	GTATCGACTCTTGTACGTGATTTGGAAGAGGAAATTAAGGAAATAAGAGGGTAAATACCAA	1044
Rp1-blb2	GTATCAACTCTTGTACGTGATTTGGAAGAGGAAATTAAGGATTAAGAGAGTACTGACGAA	1077
	***** ***** ** ***** ** ***** ** *****	
M1.1.1	ACAAATTTGCAACCTTAGACTTCTGGAATAATTTGAACCTCTCAGAAAGATCTCAA	1104
M1.1.2	ACAAATTTGCAACCTTAGACTTCTGGAATAATTTGAACCTCTCAGAAAGATCTCAA	1104
Rp1-blb2	ACAAATTTGCAACCTTAAGATTTCTGGAATAATTTGAACCTCTTAAAGGAAGATCTCAA	1137
	***** ***** ** ***** ** ***** ** *****	
M1.1.1	CATGTTTATCTGAAGCCCTGGATTCATCTCAATGTTGTTCCCATGATGATGGACCA	1164
M1.1.2	CATGTTTATCTGAAGCCCAATTCATCTCAATGTTGTTCCCATGATGATGGACCA	1164

Figure 16 (cont.)

Rpl-b1b2	CATGTTTATCTGAAGTCGCGGATTCAATCTCAATATTGCTTCCCATGAGTGATGGACCT 1197
	***** ** *****
M1.1.1	CTCTTCATGCACTCTACACATACACTTAATGATTTGTAGATCTCTATGCTTTATCA 1224
M1.1.2	CTCTTCATGCACTCTACACATGCACTTAATGATTTGTAGATCTCTATGCTTTATCA 1224
Rpl-b1b2	CTCTTCATGCACTCTACACATGCACTTTAGATGATTTGCTGGATCTCAATGCTTTATCA 1257
	***** * ***** * *****
M1.1.1	ATTGCTTTGTATAAGGAAGAATCGAGCTGGTGAAGCAAGACCTGAAATTCATAAGATCA 1284
M1.1.2	ATTCTTTGTATAAGGAAGAATCGAGTTGGTGAAGCAAGACCTGAAATTCATAAGATCA 1284
Rpl-b1b2	ATTGCTTTGTATAAGGAAGAATCGAGCTGGTGAAGCAAGACCTGGAATTCATAAGATCT 1317
	*** ***** **** * *****
M1.1.1	TTCTTTGTGGATGCTG---AGCAAGGATTTGATAAAGATCTCTGGGCACTGTTCTAGAT 1341
M1.1.2	TTCTTTGGGATGCTGCTGAGCAAGGATTTGATAAAGATCTCTGGGCACTGTTCTAGAT 1344
Rpl-b1b2	TTTTTCGCAATATTG---AGCAAGGATTTGATAAAGATCTCTGGGCACTGTTCTAGAT 1374
	** ** * ** *****
M1.1.1	GTGGCTTATGAGGCAAAAGATGTCATAGATTCATTTATTGTTTCGAGATATGGTCTCTTA 1401
M1.1.2	GTGGCTTATGAGGCAAAAGATGTCATAGATTCATTTATTGTTTCGAGATATGGTCTCTTA 1404
Rpl-b1b2	GTGGCATATGAGGCAAAAGATGTCATAGATTCATTTATTGTTTCGAGATATGGTCTCTTA 1434

M1.1.1	CATCTTTATTTCTCATTCCCATTTACCATTAAGAAAGATCAAACTTTATCAAGAGAGATC 1461
M1.1.2	CATCTTTATTTCTCATTCCCATTTACCATTAAGAAAGATCAAACTTTATCAAGAGAGATC 1464
Rpl-b1b2	CATCTTTATTTCTCATTCCCATTTACCATTAAGAAAGATGATGATGCTTTATCAAGAGAGGTC 1494
	***** * *****
M1.1.1	TCCTGTTTATGATGAGAACATTTCCCAAGGACAGAGGCTTAATCGTTGTGAACCTCCCAAG 1521
M1.1.2	TCCTGTTTATGATGAGAACATTTCCCAAGGACAGAGGCTTAATCGTTGTGAACCTCCCAAG 1524
Rpl-b1b2	TCGTATTTTATGATGAGAACATTTCCCAAGGACAGAGGCTCATCGTTGTGAACCTCCCAAG 1554

Figure 16 (cont.)

```

*** **** ***** ***** ***** ***** ***** ***** *****
M1.1.1 AACCCAGTTGAGAGAAATCATTTGACACATGATAAATAACTAGCTAGGTTTTTGAGGAGGAA 1581
M1.1.2 AACCCAGTTGAGAGAAATCATTTGACACATGATAAATAACTAGCTAGGTTTTTGAGGAGGAG 1584
Rpl-b1b2 AACCCAGTTGAGAGAAATCATTTGACACATGATAAATAACTAGCTAGGTTTTTGAGGAGGAG 1614
***** ***** ***** ***** ***** ***** ***** *****
M1.1.1 ACAAACTTGTATCTTAGAANAAGCTCACCAAGTGGATCGGCAGATCTAGATGTCAATTTTCGATC 1641
M1.1.2 ACAAACTTGTATCTTAGAANAAGCTCACCAAGTGGATCGGCAGATCTAGATGTCAATTTTCGATC 1644
Rpl-b1b2 ACAAACTTGTATCTTAGAANAAGCTCACCAAGTGGATCGGCAGATCTAGATGTCAATTTTCGATC 1674
***** ***** ***** ***** ***** ***** ***** *****
M1.1.1 ACTGTTATGCCGGGTTCCAGTAAACTACTTTTGGCATACAAAAGTATACAAATGATTAAGTCA 1701
M1.1.2 ACGGTATGCCGGGTTCCAGTAAACTACTTTTGGCATACAAAAGTATACAAATGATTAAGTCA 1704
Rpl-b1b2 ATTGGTATGCCGGGTTTAGGTAAACTACTTTTGGCATACAAAAGTATACAAATGATTAAGTCA 1734
***** ***** ***** ***** ***** ***** ***** *****
M1.1.1 GTTCTAGCCGTTTCGACCTTCGTGTCATGGTGCAGGTCGACCCAGGATGCTGATGGAAG 1761
M1.1.2 GTTCTAGACATTTTGACCTTCGTGTCATGGTGCAGGTCGACCCAGGATGCTGATGGAAG 1764
Rpl-b1b2 GTTCTAGACATTTTGACCTTCGTGTCATGGTGCAGGTCGACCCAGGATGCTGATGGAAG 1794
***** ***** ***** ***** ***** ***** ***** *****
M1.1.1 AAGTTGTTGGAATACAAATTTTCAGTCAAGTTAGTGCATCAGATTCAAAATTTGAGTGAGAAT 1821
M1.1.2 AAGTTGTTGGAATACAAATTTTCAGTCAAGTTAGTGCATCAGATTCAAAATTTGAGTGAGAAT 1824
Rpl-b1b2 AAGTTGTTGGAATACAAATTTTCAGTCAAGTTAGTGCATCAGATTCAAAATTTGAGTGAGAAT 1854
***** ***** ***** ***** ***** ***** ***** *****
M1.1.1 ATTGATGTTGCTGATAAATTTACGGAACAACACTGTTTGGAAAAGAGGTATCTTATTTGCTTTA 1881
M1.1.2 ATTGATGTTGCTGATAAATTTACGGAACAACACTGTTTGGAAAAGAGGTATCTTATTTGCTTTA 1884
Rpl-b1b2 ATTGATGTTGCTGATAAATTTACGGAACAACACTGTTTGGAAAAGAGGTATCTTATTTGCTTTA 1914
***** ***** ***** ***** ***** ***** ***** *****

```

Figure 16 (cont.)

M1.1.1	GATGACGTGTGGGATACTACATGGGATGAGTTAAACAAGACCTTTTCTGATCTAAG	1941
M1.1.2	GATGATGTGTGGATACTACTCATTTGATGAGTTGCAAGACCTTTTCTGATCTAAG	1944
Rp1-blb2	GATGACGTGTGGGATACTATATACATGGGATGAGCTAACAGACCTTTTCTGATGCTATG	1974
	**** * * * * *	
M1.1.1	AAAGGAGTAGGATTAATTTTGACAACTCGGGAAAAGAGTGGCTTTGCAATGGAAAAGCTG	2001
M1.1.2	AAAGGAGTAGGATTAATTTTGACAACTCGGAAAAGAGAGTGGCTTTGCAATGGAAAAGCTG	2004
Rp1-blb2	AAAGGAGTAGGATTAATTTTGACAACTCGGAAAAGAGAGTGGCTTTGCAATGGAAAAGCTC	2034
	***** * * * * *	
M1.1.1	AACACTGATCCTCTTGACCTTCGATTGCTAAGACCAAGATGAGTGGGAACTATTAGAG	2061
M1.1.2	AACACTGATCCTCTTGACCTTCGATTGCTAAGACCAAGATGAGTGGGAACTATTAGAT	2064
Rp1-blb2	TACACTGATCCTCTTGACCTTCGATTGCTAAGATCAGAAAGTGGGAGTTATTAGAG	2094
	***** * * * * *	
M1.1.1	AAAAGGCAATTTGGGAATGAGAGTTGCCCTGATGAACCTATTAGATGTCGGTAAAGAAATA	2121
M1.1.2	AAAAGGCAATTTGGGAATGAGAGTTGCCCTGATGAACCTATTAGATGTCGGTAAAGAAATA	2124
Rp1-blb2	AAAAGGCAATTTGGGAATGAGAGTTGCCCTGATGAACCTATTAGATGTCGGTAAAGAAATA	2154
	***** * * * * *	
M1.1.1	GCGGAAATTTGTAAGGGCTTCCTTTGGTGGCTGATCTGATTCGTGGAGTCATTCGTGGG	2181
M1.1.2	GCGGAAATTTGTAAGGGCTTCCTTTGGTGGCTGATCTGATTCGTGGAGTCATTCGTGGG	2184
Rp1-blb2	GCGGAAATTTGTAAGGGCTTCCTTTGGTGGCTGATCTGATTCGTGGAGTCATTCGTGGG	2214
	***** * * * * *	
M1.1.1	AGGGAAGAAAGAGAGTGTGGCTTGAAGTTCAAAGTAGTTGACGTTCTTTTATTG	2241
M1.1.2	AGGGAAGAAAGAGAGTGTGGCTTGAAGTTCAAAGTAGTTGACGTTCTTTTATTG	2244
Rp1-blb2	AGGGAAGAAAGAGAGTGTGGCTTGAAGTTCAAAGTAGTTGACGTTCTTTTATTG	2274
	***** * * * * *	

Figure 16 (cont.)

M1.1.2	TTGCCGTGTCMAATTACCATTGATTATGATGAGGAGGAGGACACTTTGGGCTTAATTTT	2664
Rpl-b1b2	TTGCCACGTCMAATTAGCATTTGATGATGATGAAGAGCCTTTGGGCTTAATTTT	2694

M1.1.1	GTCAATGTCGATTCAAATAGAAAGAGCATTCTGGTAAACACCTCTATCTTTGAGGATA	2718
M1.1.2	GTCAATGTCGATTCAAATAGAAAGAGCATTCTGGTAAACACCTCTATCTTTGAGGATA	2724
Rpl-b1b2	GTCCGTGTTCCGTTCAAATAAGAAAGGCATTCGGTAAACACCTCTATCTTTGAGCATA	2754

M1.1.1	ATTGGAGACGAGTGGATGACAGTGTTCCTGATGCATTTCCACTAAGACACTTGAGGCTT	2778
M1.1.2	ATTGGAGACGAGTGGATGACAGTGTTCCTGATGCATTTCCACTAAGACACTTGAGGCTT	2784
Rpl-b1b2	AATGGAGATGAGCTGGAGCACCATTCTTCTGATGACATTTCACTTAAGACACTTGAGGCTT	2814
	* *****	
M1.1.1	CTTAGAGTGTGGACCTGCATACGCTCTTTTATCATGCTGTAAGATCTTTTGCTGAATGAA	2838
M1.1.2	ATTAGAGTGTGGACCTGCATACGCTCTTTTATCATGCTGTAAGATCTTTTGCTGAATGAA	2844
Rpl-b1b2	CTTAGAACCTTGACCTGGAACTCCTTTTATCATGCTTAAAGATCTTTTGCTGAATGAA	2874

M1.1.1	ATATGCATGTTGGAATCATTTGAGGTACTTATCCATGACACACAAAGTTAAATATCTGCCT	2898
M1.1.2	ATATGCATGTTGGAATCATTTGAGGTACTTAAAGATTCGGACACAAAGTTAAATATCTGCCT	2904
Rpl-b1b2	ATATGCATGTTGGAATCATTTGAGGTACTTAAAGATTCGGACACAAAGTTAAATCTGCCT	2934

M1.1.1	TTGCTTTTCTCAAACCTCTGGAATCTAGAAAGCTGTTTGTGTCTACACACGATCAATC	2958
M1.1.2	TTGCTTTTCTCAAACCTCTGGAATCTAGAAAGCTGTTTGTGTCTACAAAGGATCAATC	2964
Rpl-b1b2	TGTCTTTTCTCAAACCTCTGGAATCTAGAAATCTTGTGTGTGATPACAAAGATCAATC	2994
	** *****	
M1.1.1	TTGGTACTATTACCGAGAAATTTGGATCTTGTAAGAGTTGCGAGTGTCTCCGTGGATGCT	3018
M1.1.2	TTGGTACTATTACCGAGAAATTTGGATCTTGTAAGAGTTGCGAGTGTCTCCGTGGATGCT	3024

Figure 16 (cont.)

Rpl-b1b2	TTGATACATATTACCGAGAAATTTGGGATCTGTGTAAGTTGCAAGTCTGTTTCACAGCTGCT	3054
	*** *****	
M1.1.1	TGTTCTTCTTTGATATGATGTCAGATCATCATATGATAGTCAGGGACACAAAGTTA	3078
M1.1.2	TGTTCTTCTTTGATATGATGTCAGATCATCATATGATAGTCAGGGACACAAAGTTA	3084
Rpl-b1b2	TGTTCTTCTTTGATATGATGTCAGATCATCATATGATAGTCAGGGACACAAAGTTA	3114

M1.1.1	GAGAATTTGAGAATATTACGGGAATGTTGATTTTCCTATTTCGAAAGATACAAAGAAATTT	3138
M1.1.2	GAGAATTTGAGAATATTACGGGAATGTTGATTTTCCTATTTCGAAAGATACAAAGAAATTT	3144
Rpl-b1b2	GAGAATTTGAGAATATTACGGGAATGTTGATTTTCCTATTTCGAAAGATACAAAGAAATTT	3174

M1.1.1	TTCAAAGGTTTCCCAATCTTCAGTTCCTTCATTTGAACTCAGGAGTCATGGGATAT	3198
M1.1.2	TTCAAAGGTTTCCCAATCTTCAGTTCCTTCAGTTCCTTCATTTGAACTCAGGAGTCATGGGATAT	3204
Rpl-b1b2	TTCAAAGGTTTCCCAATCTTCAGTTCCTTCATTTGAACTCAGGAGTCATGGGATAT	3234

M1.1.1	TCACAGAGCAACATTTGGTTCGGAATTTGGATTTTCCTACCTGAACTAGAAACACTCTCT	3258
M1.1.2	TCACAGAGCAACATTTGGTTCGGAATTTGGATTTTCCTACCTGAACTAGAAACACTCTCT	3264
Rpl-b1b2	TCACAGAGCAACATTTGGTTCGGAATTTGGATTTTCCTACCTGAACTAGAAACACTCTCT	3294

M1.1.1	GTAGGTTTTAAAGTTTCAAAACAAACGATAGTGGGTCTCTCTGTAGCGCAAAATCGGCG	3318
M1.1.2	GTAGGTTTTAAAGTTTCAAAACAAACGATAGTGGGTCTCTCTGTGTGACAAATCGGCG	3324
Rpl-b1b2	GTAGGTTTTAAAGTTTCAAAACAAACGATAGTGGGTCTCTCTGTGACAAATCGGCG	3354

M1.1.1	TGGATTTTCACTTCCCTCAAATTTGAAAATTAATGTGGTTCGTGAATTTCCGCTGACA	3378
M1.1.2	TGGATTTTCACTTCCCTCAAATTTGAAAATTAATGTGGTTCGTGAATTTCCGCTGACA	3384
Rpl-b1b2	TGGATTTTCACTTCCCTCAAATTTGAAAATTAATGTGGTTCGTGAATTTCCGCTGACA	3414

Figure 16 (cont.)

Mil.1	GGCCAAAGAATATCCCTTATTTAAGTAG	3768
Mil.2	GGCCAGAAGATATCCCTTATTTAAGTAG	3774
Rp1-b1b2	GGCCAGAAGATATCCCGTATTTAAGTAG	3804

Figure 17: Multiple Sequence Alignments of M1.1, M1.2 and Rpi-blb2 proteins

CLUSTAL W (1.82) Multiple Sequence Alignments

```

Sequence format is Pearson
Sequence 1: M1.1 1255 aa
Sequence 2: M1.2 1257 aa
Sequence 3: Rpi-blb2 1267 aa
Start of Pairwise Alignments
Aligning...
Sequences (1:2) Aligned. Score: 91
Sequences (1:3) Aligned. Score: 82
Sequences (2:3) Aligned. Score: 81
Guide tree file created: [/ebi/extern/clusterw-work/interactive/clusterw-20040503-14322840.dnd]
Start of Multiple Alignment
There are 2 groups
Aligning...
Group 1: Sequences: 2 Score:25939
Group 2: Sequences: 3 Score:24668
Alignment Score 19405
CLUSTAL-Alignment file created [/ebi/extern/clusterw-work/interactive/clusterw-20040503-14322840.aln]

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CLUSTAL W (1.82) multiple sequence alignment

M1.1 MEKKNEEANNLIVLSKSDIADVLFLE--NEENQALDKDQVEKIKLQWAFICT 57

57

Figure 17 (cont.)

m1.1.2	57	KRRKQTEAEANNSLVFSALSKDIANVLLFLE---NEENOKALDKQVEKFLKAWAETCT57
rpl-b1b2	60	MEKRKNDEANNSLSTFSALKDAADVWIDFLERLKNVDEQKAVDVLIESLKLKUTFTCT60
		***** ** ** ** **
m1.1.1	109	YVQLSGSDFFQFEDIMTRKQEVENLLQPLDD-----VFTSLTSMDDCISLYHR109
m1.1.2	109	YVQLSVDFQFEDIMTRKQEVENLLQSLDD-----VLTSLTSMDDCISLYHR109
rpl-b1b2	120	YVQLSVDFQFEDIMTRKQEVENLLQPLDDGDKVGCKVLYLISLAGMDDCISLYHR120
		***** ** ** ** *
m1.1.1	169	SYKSDAIMMDEQLDFLLINLYHLSKHAEKIPFGVQTVQEVLQNICGNIRDFGLHIVGCI169
m1.1.2	169	SYKSDAIMMDEQLDFLLINLYHLSKHAEKIPFGVQTVQEVLQNVGNIIRDFGLHIVGCI169
rpl-b1b2	179	S-KSDAIMMDEQLDFLLINLYHLSKHRAEKIPFGVQTVQEVLQNGIIRDFGLHIVGCI179
		* **** * **** * **** * **** * **** * **** * **** * **** *
m1.1.1	229	KHEWENVLPFLQMAADVGVHFWMDQDDEBSRLSELDEDEQNDRSRLFKLAHLIKIV229
m1.1.2	229	KHEWENVLPFLQMAEVRGVHFWMDQDDEBSRLSELDEDEHNRDRLSFQULHLIKIV229
rpl-b1b2	239	KHEWENVLPFLQMAEVRGVHFWMDQDDEBSRLSELDEDEQNDRLQFLKLAHLIKIV239
		***** ** ** ** * **** * **** * **** * **** * **** * **** *
m1.1.1	289	PVELEVTHICYTNLKASTSAEVLGIKQLLETSPDILREYVLPLOEHMVTVPSTSGAR289
m1.1.2	289	PTELEVHMI CYTNLKASTSAEVRGIKQLLETSPDILREYVLPLOEHMTVPSTSGAR289
rpl-b1b2	299	PTELEVHMI CYTNLKASTSAEVRGIKQLLETSPDILREYVLPLOEHMTVVPSTSGAR299
		* **** * **** * **** * **** * **** * **** * **** * **** *
m1.1.1	348	NIHWAMEFLILLISLDMPP-KQFIHDKUFLDLARVGVLTRVSTVLRLDEEPRNKGNQ348
m1.1.2	348	NIHWAMEFLILLISLDMPP-KQFIHDKUFLDLARVGVLTRVSTVLRLDEEPRNKGNQ348
rpl-b1b2	359	NIHWAMEFLILLISLDMPPKQFIHDKUFLDLARVAVALTRVSTVLRLDEEKLRIKSTDE359
		***** ** ** ** * **** * **** * **** * **** * **** * **** *
m1.1.1	408	TNCATLDLLENIELLKDLKHAVALKALDSQCCFPMSDGPFLFHLHLLHLDLDSNAYS408
m1.1.2	408	TNCATLDLLENIELLKDLKHAVALKALDSQCCFPMSDGPFLFHLHLLHLDLDSNAYS408
rpl-b1b2	418	TNCATLDLLENIELLKDLKHAVALKALDSQCCFPMSDGPFLFHLHLLHLDLDSNAYS418

Figure 17 (cont.)

Rp1-blb2 419
*****:*****:*** *****:***:*****
TNCATCTLENIELIKEDKHVYIKVDPSSOYCPFMSDGLFPHLLQRLHLDLDSNAYS

M1.1 467
IALIKEELVWODAFIRSFVD-AEQGLYKDWARVLVDVAYEAKDVIDSIIVRDNGLL
M1.2 468
ISIIKEELVSGEIEFSGDAEQLYKDWARVLVDVAYEAKDVIDSIIVRDNGLL
Rp1-blb2 478
IALIKEQIYKEDLEFIRSFAN-TEQGLYKDWERVLVDVAYEAKDVIDSIIVRDNGLL
::*:* *:::*:*****: *****:*****
HLISLPTTIKKIKKEIEISALDENI PKDRGLIVNSPKKEVERKSLTTDKITVGFEE 527
M1.1
HLISLPTTIKKIKKEIEISALDENI PKDRGLIVNSPKKEVERKSLTTDKIIVGFEE 528
M1.2
HLISLPTTRKQMLIKKEEVDLHENI SNRGLIVNSPKKEVERKSLTTDKIIVGFEE 538
Rp1-blb2
***** ** : *****: *.*.*.*:***** ***** ***** ** **
***** ** : *****: *.*.*.*:***** ***** ***** ** **
TNLIIRKLTSGADLDVLSITGMPSGKTTLAYKVYNDKSVSRFDLRACVTDQGCDEK 587
M1.1
TNLIIRKLTSGADLDVLSITGMPSGKTTLAYKVYNDKSVSRHFDLRACVTDQGDIDK 588
M1.2
TNLIIRKLTSGADLDVLSITGMPSGKTTLAYKVYNDKSVSSHFDLRACVTDQVYDEK 598
*****:***** ***** ***** ***** ***** ***** *:*
KLINTIFSOYSDSDSKLSINIDVADKLKQLFGKRYLIVLDDVWDTTTWDLTTRPFPPEAK 647
M1.1
KLIDTIFSOYSGSDSKLSINIDVADKLKQLFGKRYLIVLDDVWDTTTDLTTRPFPPEAK 648
M1.2
KLIDKIFNQYSGSDSKLSINIDVADKLKQLFGKRYLIVLDDVWDTTTDLTTRPFPPEAK 658
Rp1-blb2
::*.*.*:***** ***** ***** ***** ***** *
::*.*.*:***** ***** ***** ***** ***** *
KGSRIILTTRKEKVALHGKLTDPDLRLRPDESWELEKRAFGENSCPDDELLDVGKEI 707
M1.1
KGSRIILTTRKEKVALHGKLTDPDLRLRPDESWELEKRTFGENSCPDDELLDVGKEI 708
M1.2
KGSRIILTTRKEKVALHGKLTDPDLRLRPDESWELEKRAFGENSCPDDELLDVGKEI 718
Rp1-blb2
*****:***** *****:*****:*****:*****:*****:*****
*****:***** *****:*****:*****:*****:*****:*****
AENCKGLPLVADLIAGIAGREKRSVWLEQSSLSFINSSEVEMKVIELSYDHLPHH 767
M1.1
AENCKGLPLVADLIAGIAGREKRSVWLEQSSLSFINSSEVEMKVIELSYDHLPHH 768
M1.2
AENCKGLPLVADLIAGIAGREKRSVWLEQSSLSFINSSEVEMKVIELSYDHLPHH 778
Rp1-blb2

Figure 17 (cont.)

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*****:*****:***** ..* *****:*****:*****.*
M1.1 IKPCLLYFASPKDPSLTIYELANYFGAEGVFVGTENMGSEVVKIYMDLLIYSLVICF 827
M1.2 IKPCLLHFAWPKDPLTIYITFYILGAGVEVTEKMGIEVVKIYMDLLIYSLVICF 828
Rp1-b1b2 IKPCLLYFASAPKDWVTTHLEKLIWFEVGTENMGIEVVKIYDILLIYSLVICF 838
*****:*** ** :..* *****:*****:*** *****
NEIGVALNFOIHDLVHDFCLIKARKENLFDQIRSSAPSDLLPRQITIDCDEE-HFGINF 886
M1.1 NEIGDILNFQIHDLVHDFCLIKARKENLFDRISSAPSDLLPRQITIDDEEEHFGINF 888
M1.2 NEIGDYPTCQIHDLVHDFCLIKARKEKLCRISSAPSDLLPRQISIDYDDDEEHFGINF 898
Rp1-b1b2 *****:*** ** *****:*****:*** ** *****
VFDSNKKRHSKGKLYSLRIIGDQDDSVSDAFHLRLHLLRAVLDLHTSFIMWKDSLNE 946
M1.1 VFDSNKKRHSKGKLYSLRINGQDDSVSDAFHLRLHLLRAVLDLPSLIWNDSSLNE 948
M1.2 VLFSGNKKRHSKGKLYSLTINGDELDDHSDTFHLRLHLLRLTLHLESSFIMWKDSLNE 958
Rp1-b1b2 *:*****:***** * **:*** :*:*****:*. * .*:*****:*****
ICMLNHLRYLSIDTQVKYLPFSNLWNLESIFVSTNRSIIVLLPRILDLVKRLVSVA 1006
M1.1 ICMLNHLRYLRIRTOVKYLPFSNLWNLESIFVSNKGSILVLLPRILDLVKRLVSVA 1008
M1.2 ICMLNHLRYLSITGVKSLPFSNLWNLEILFVNDKESTLILPRIDWLVLQVLTFA 1018
Rp1-b1b2 *****:*** ** *****:***** * **:*** :*:*****:*****
CSFFDMDADESILIAEDTKLENLRILTELLISYKDKTMIKFRFNLQLISFELKESWDY 1066
M1.1 CSFFDMDADESILIAEDTKLENLRILGELLISYKDKTMIKFRFNLQVLQELKESWDY 1068
M1.2 CSFFDMDADESILIAEDTKLENLTALGELVLSYWKDTEI KFRFNLQVLHFKELKESWDY 1078
Rp1-b1b2 *****:***** * **:*** :*:*****:*****:*** ** *****
STEQHWFSELDFTLETLVSGFKSNNTDGSVAVNRPMDFHFPNKLKIWRFEFLT 1126
M1.1 STEQHWFKDCLTELETICVFGKSNTHGCVSVTNRPWDFHFPNKLKELLYDFFLT 1128
M1.2 STEQWFFKLDFTLETLKLVDFEGRSNTDGSAAVNRPMDFHFPNKLKELLYDFFLT 1138
Rp1-b1b2 *****:*** ** *****:*** ** *****:*****:*** ** *****

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Figure 17 (cont.)

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M11.1      SDSLSIARLNLNLELSLYHTIIHGEEWNMGEDTFENLKFNLFNQVSIKWEVGEESFP 1186
M11.2      SDSLSIARLNLNLSLYDTIIQGEWNMGEDTFENLKFNLRLITLSKWEVGEESFP 1188
Rp1-blb2   SDSLSIARLNLLEEIIYIRTIHGEEWNMGEDTFENLKCMLSQVILTSKWEVGEESFP 1190
          ***** * : : *****
          ***** * : : *****

M11.1      NLEKLRGCHKLEIIPPSFGDIYSLKSIKIVKSPQLEDSALKIKYAEADMGGDELQIL 1246
M11.2      NLEKLRGCHKLEIIPPSFGDIYSLKSIKIVKSPQLEDSALKIKYAEADMGGDELQIL 1248
Rp1-blb2   TLEKLSDCNLEIIPPSFGDIYSLKSIKIVKSPQLEDSALKIKYAEADMGGDELQIL 1258
          ***** * : : *****
          ***** * : : *****

M11.1      GQKNIPLEK 1255
M11.2      GQKNIPLEK 1257
Rp1-blb2   GQKNIPLEK 1267
          *****
  
```

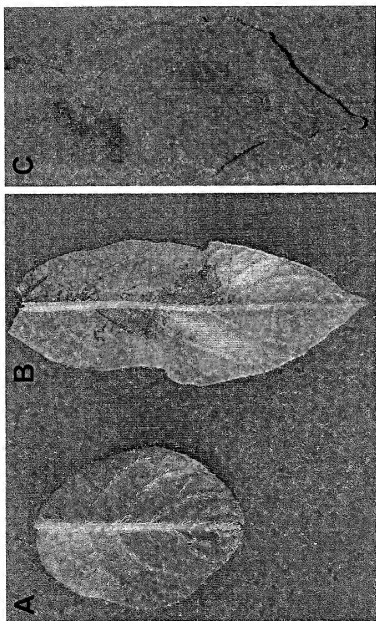


Figure 18